*Fig. 1*

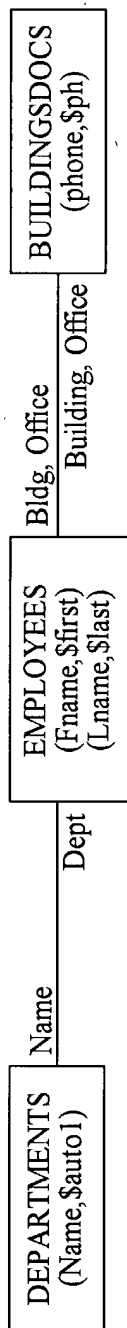


Fig. 2

0992445 . 000104

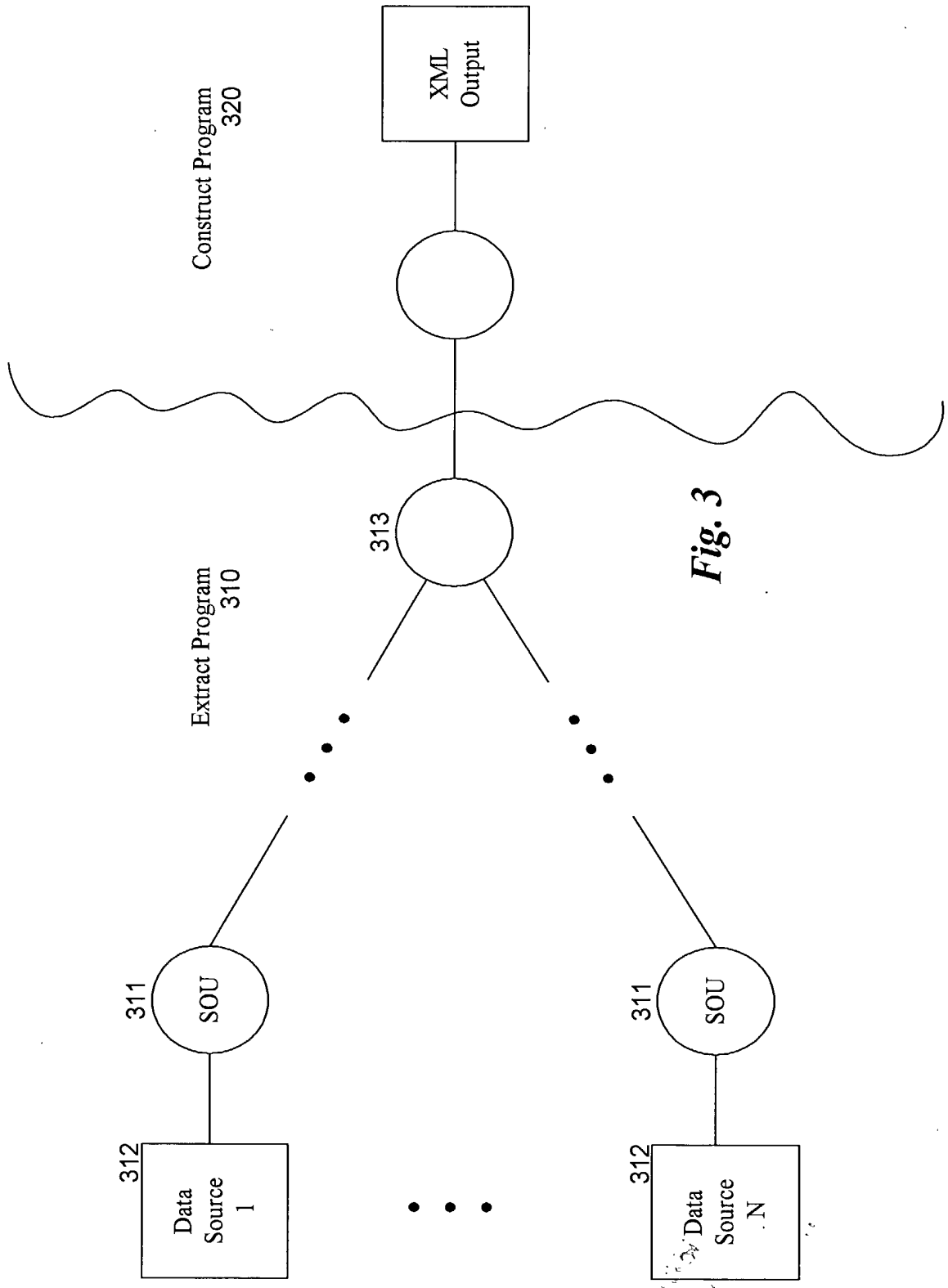


Fig. 3

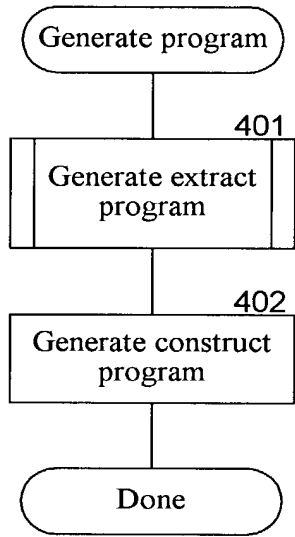


Fig. 4

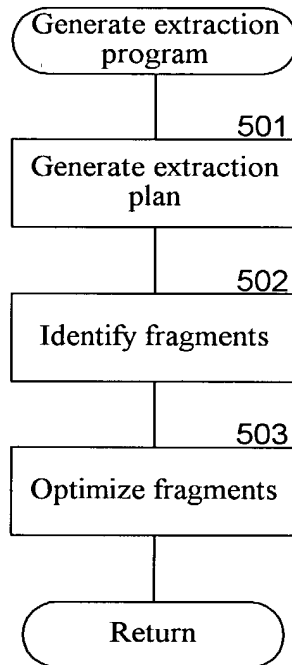


Fig. 5



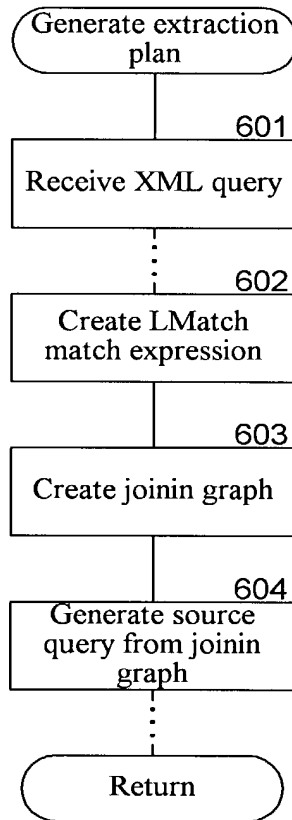


Fig. 6

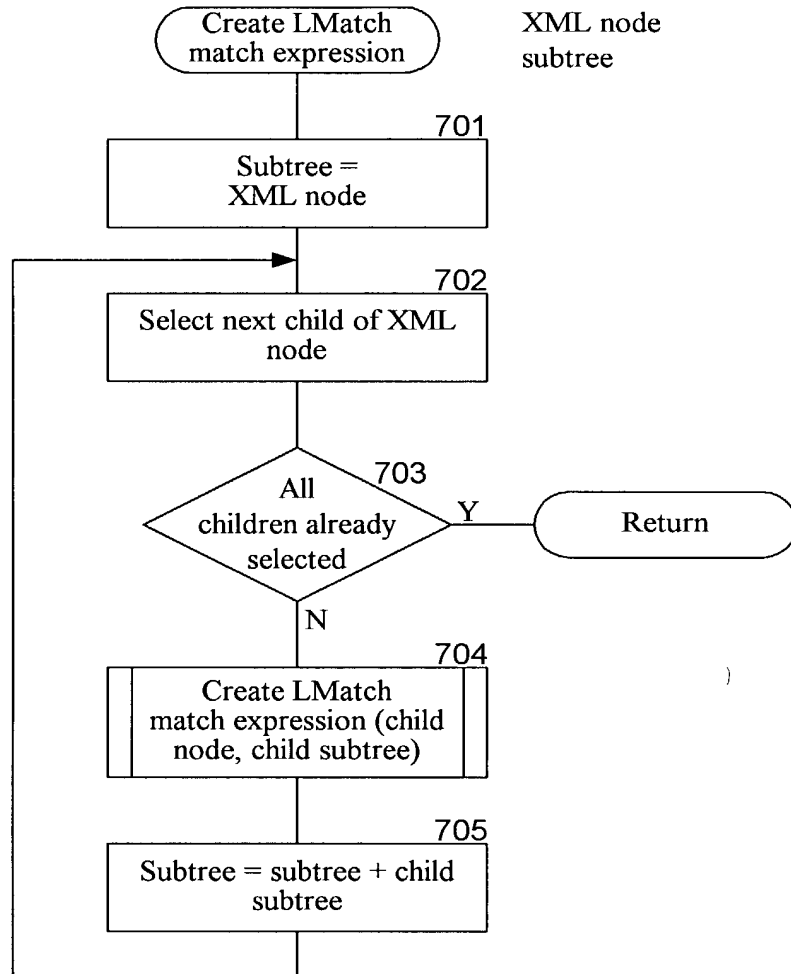
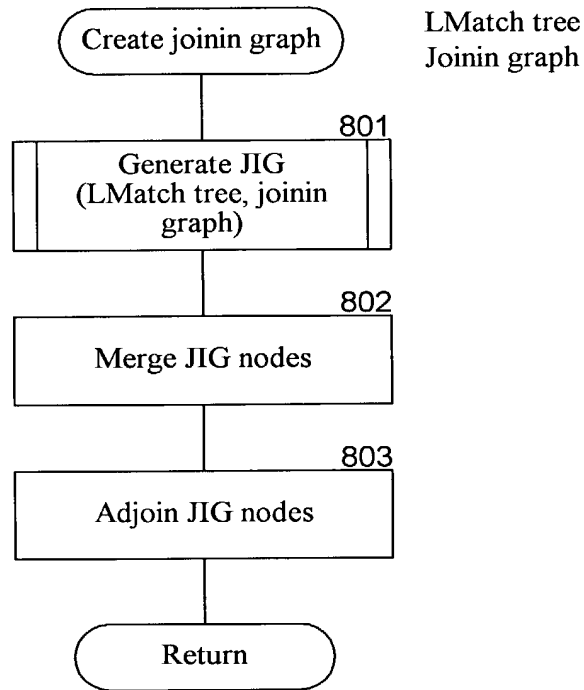


Fig. 7

***Fig. 8***

LMatch tree
Joinin graph

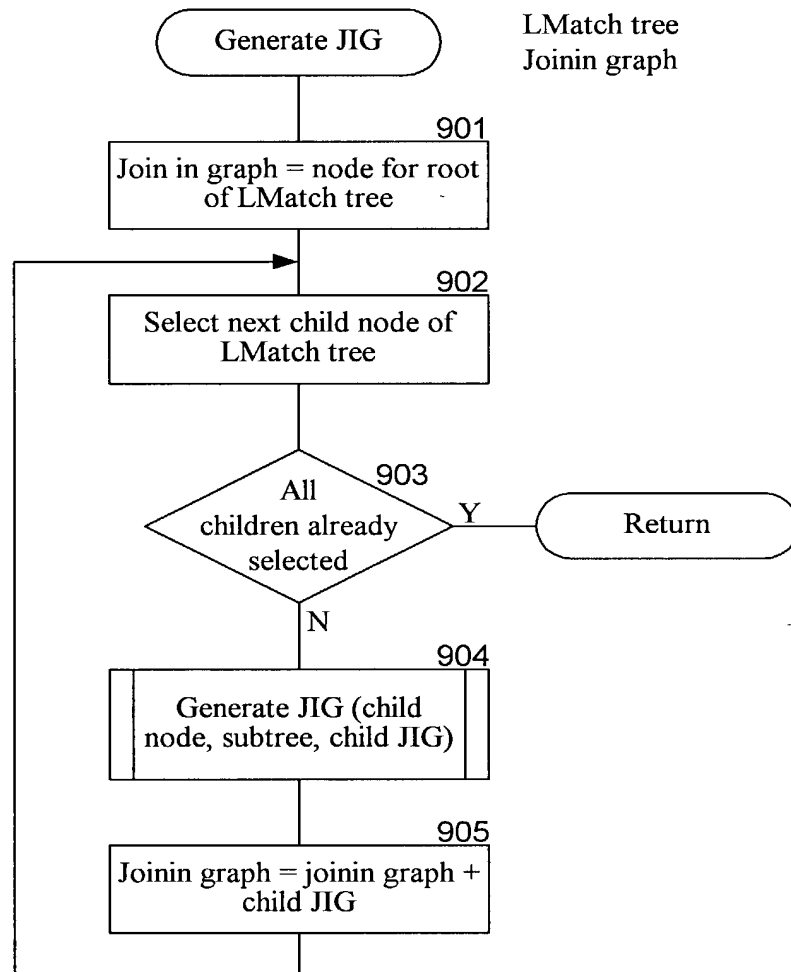


Fig. 9

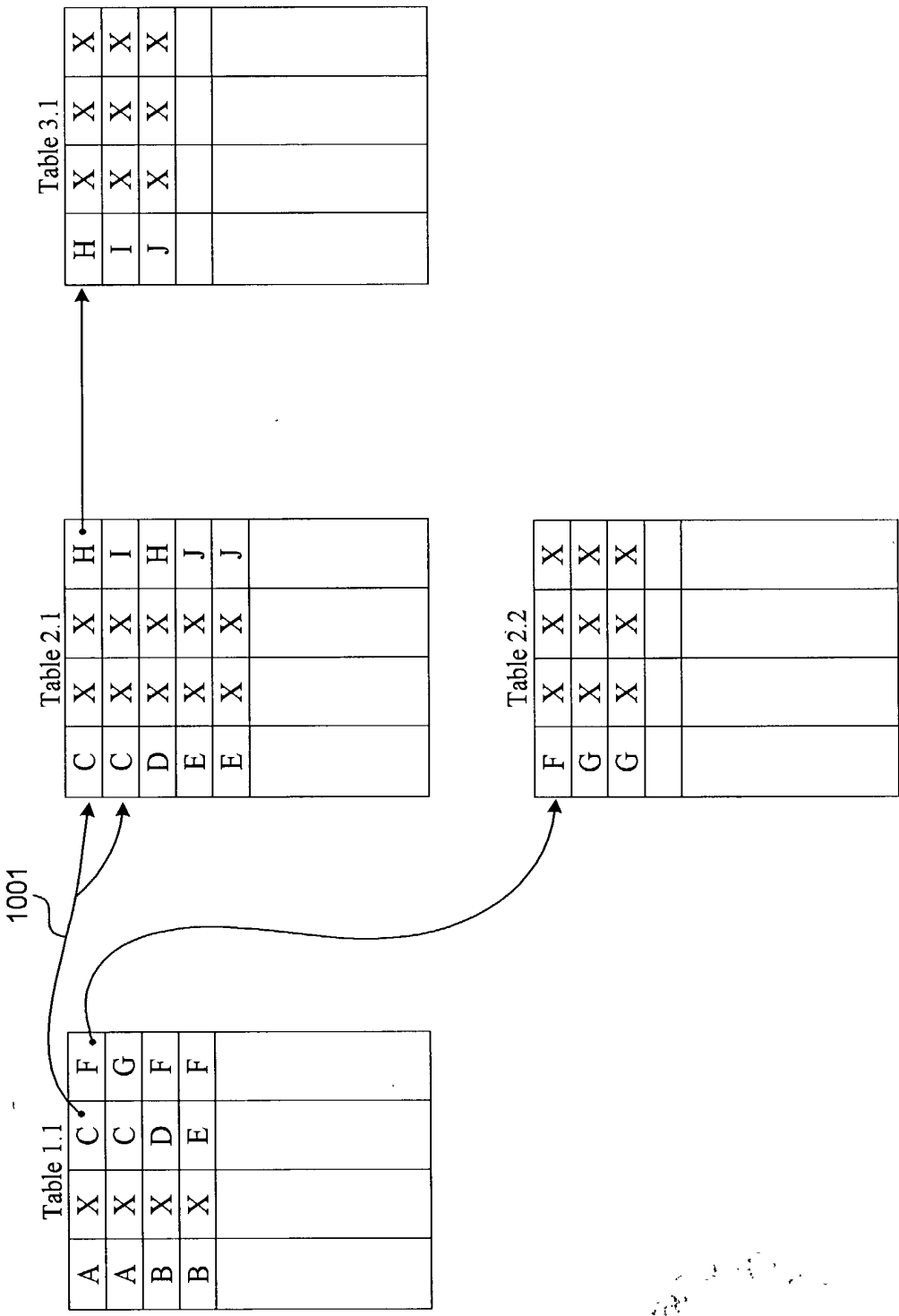


Fig. 10

C1		C2	C3	C4	C16									
1.1.1	1.1.2	1.1.3	1.1.4	2.1.1	2.1.2	2.1.3	2.1.4	3.1.1	3.1.2	3.1.3	3.1.4	2.2.1	2.2.2	2.2.3
1 A	X	C	F	C	X	X	H	H	X	X	X			
2 A	X	C	F	C	X	X	H	H	X	X	X			
3 A	X	C	F	C	X	X	I	I	X	X	X			
2 A	X	C	F	C	X	X	I	I	X	X	X			
3 A	X	C	F	C	X	X	I	I	X	X	X			
4 A	X	C	F	C	X	X	I	I	X	X	X			
1 A	X	C	G	C	X	X	H	H	X	X	X			
2 A	X	C	G	C	X	X	H	H	X	X	X			
3 A	X	C	G	C	X	X	I	I	X	X	X			
2 A	X	C	G	C	X	X	I	I	X	X	X			
3 A	X	C	G	C	X	X	I	I	X	X	X			
4 A	X	C	G	C	X	X	I	I	X	X	X			
4 A	X	C	G	C	X	X	I	I	X	X	X			
1 B	X	D	F	D	X	X	H	H	X	X	X			
2 B	X	D	F	D	X	X	H	H	X	X	X			
3 B	X	D	F	D	X	X	H	H	X	X	X			
4 B	X	D	F	D	X	X	H	H	X	X	X			
1 B	X	E	F	E	X	X	J	J	X	X	X			
2 B	X	E	F	E	X	X	J	J	X	X	X			
3 B	X	E	F	E	X	X	J	J	X	X	X			
2 B	X	E	F	E	X	X	J	J	X	X	X			
3 B	X	E	F	E	X	X	J	J	X	X	X			
4 B	X	E	F	E	X	X	J	J	X	X	X			

Fig. 11

1

Select 1.1:1 as c1
 1.1:2 as c2
 1.1:3 as c3
 1.1:4 as c4
 null as c5
 ...
 null as c16

From Table 1.1
 Where *

2

Select 1.1:1 as c1
 1.1:2 as c2
 1.1:3 as c3
 1.1:4 as c4
 2.1:1 as c5
 2.1:2 as c6
 2.1:3 as c7
 2.1:4 as c8
 null as c9
 ...
 null as c16

From Table 1.1, Table 2.1
 Where 1.1:3=2.1:1

3

Select 1.1:1 as c1
 1.1:2 as c2
 1.1:3 as c3
 1.1:4 as c4
 2.1:1 as c5
 2.1:2 as c6
 2.1:3 as c7
 2.1:4 as c8
 3.1:1 as c9
 3.1:2 as c10
 3.1:3 as c11
 3.1:4 as c12
 null as c13
 ...
 null as c16

From Table 1.1, Table 2.1, Table 3.1
 Where 1.1:3=2.1:1 and 2.1:4=3.1:1

Fig. 12

Select

1.1:1 as c1
1.1:2 as c2
1.1:3 as c3
1.1:4 as c4
null as c5
...
null as c12
2.2:1 as c13
2.2:2 as c14
2.2:3 as c15
2.2:4 as c16

Fig. 12
(cont)

From Table 1.1, Table 2.2
Where 1.1:4=2.2:1

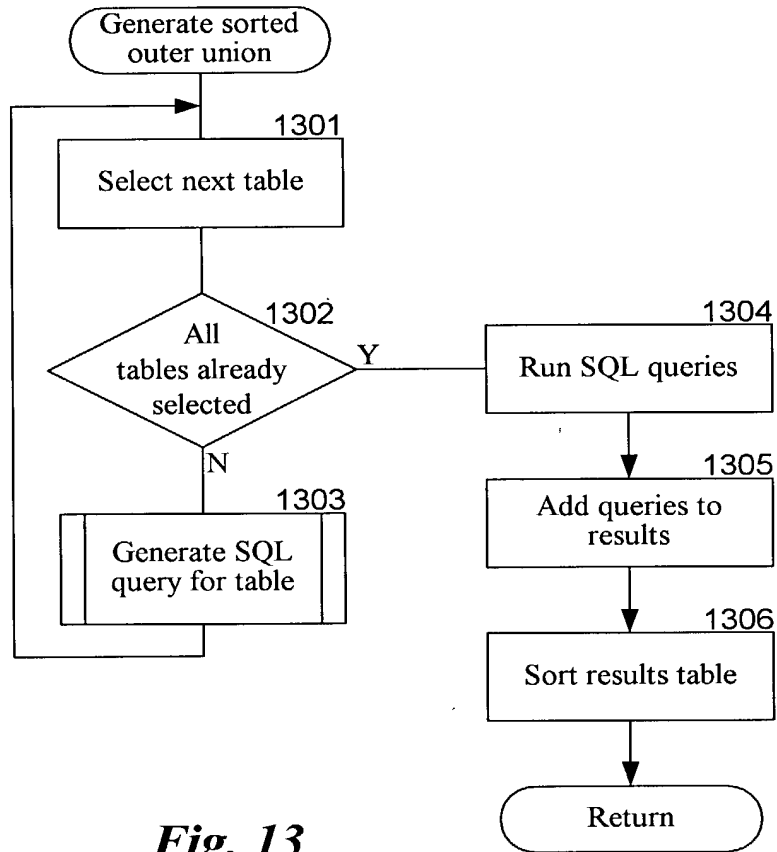


Fig. 13

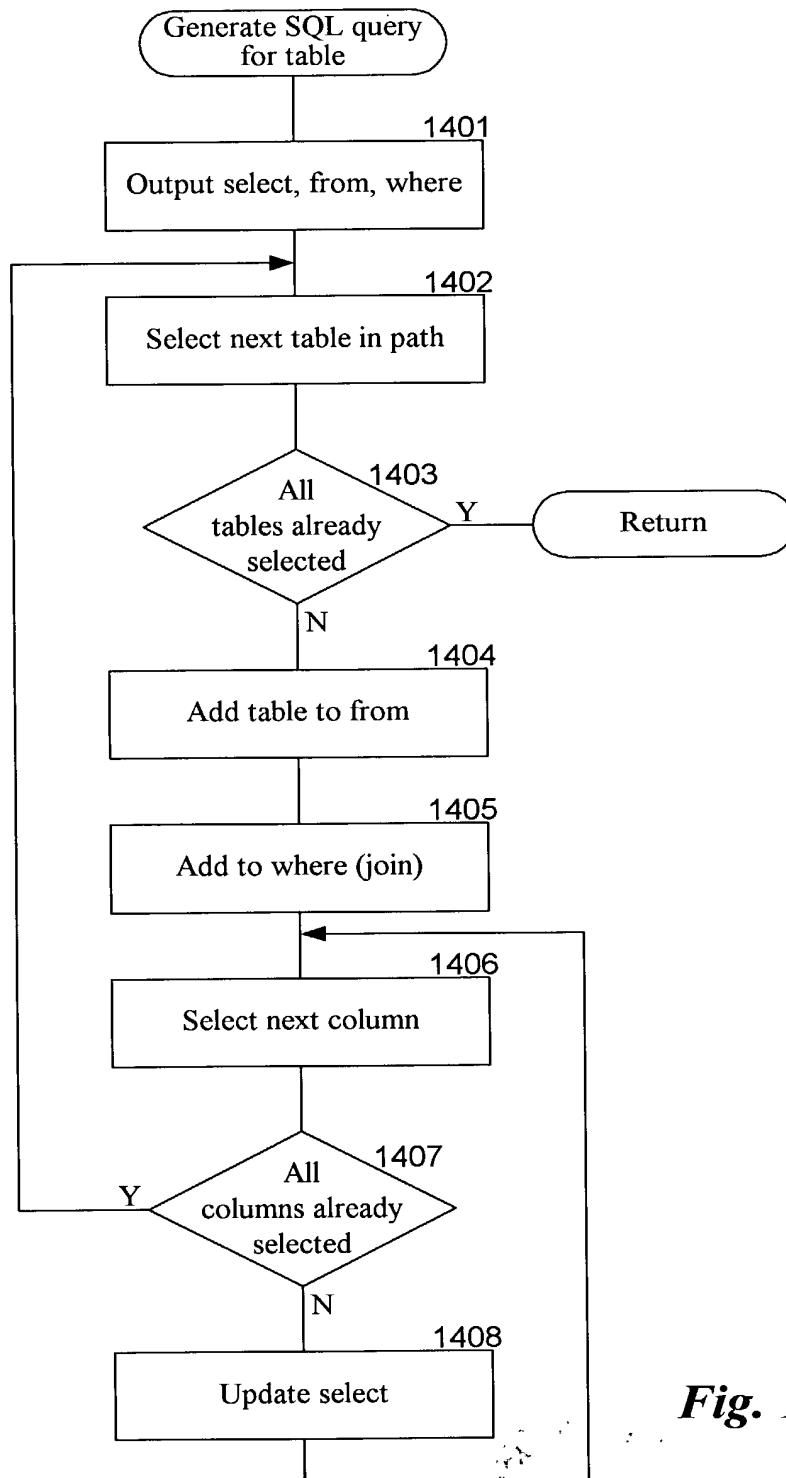


Fig. 14

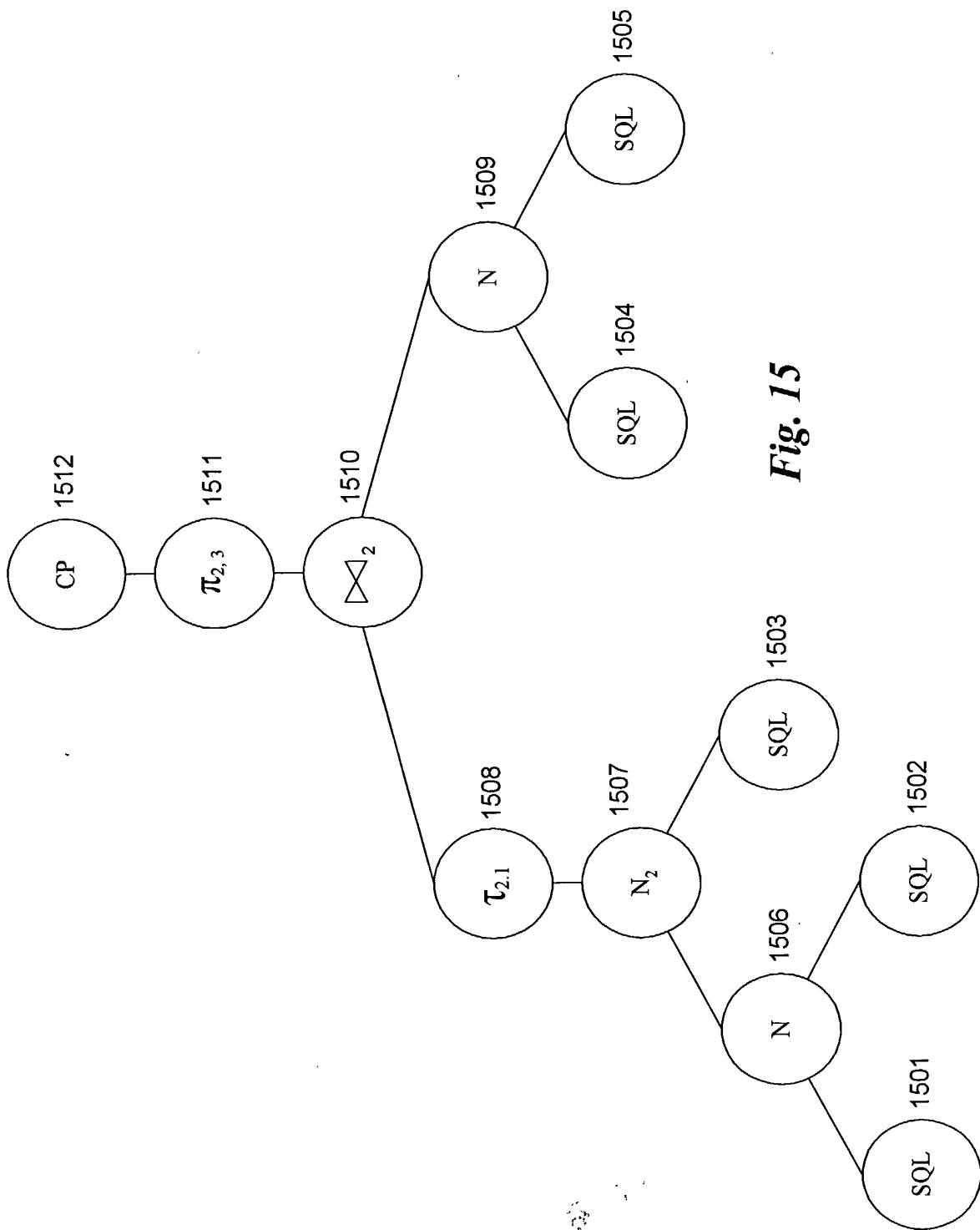


Fig. 15

Fig. 16

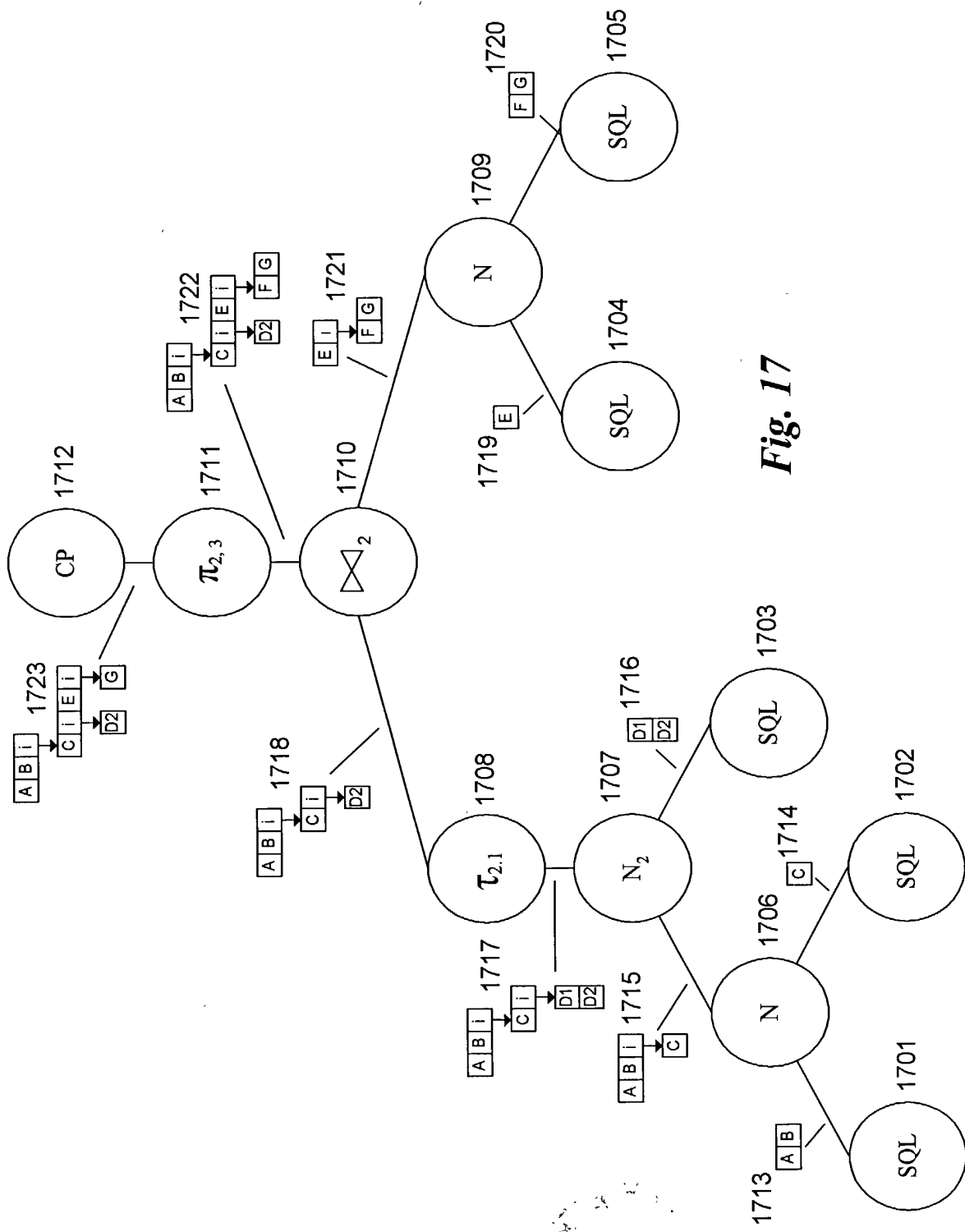


Fig. 17

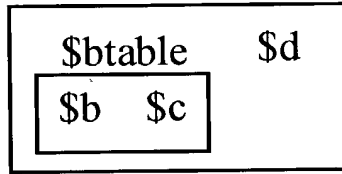


Fig. 18

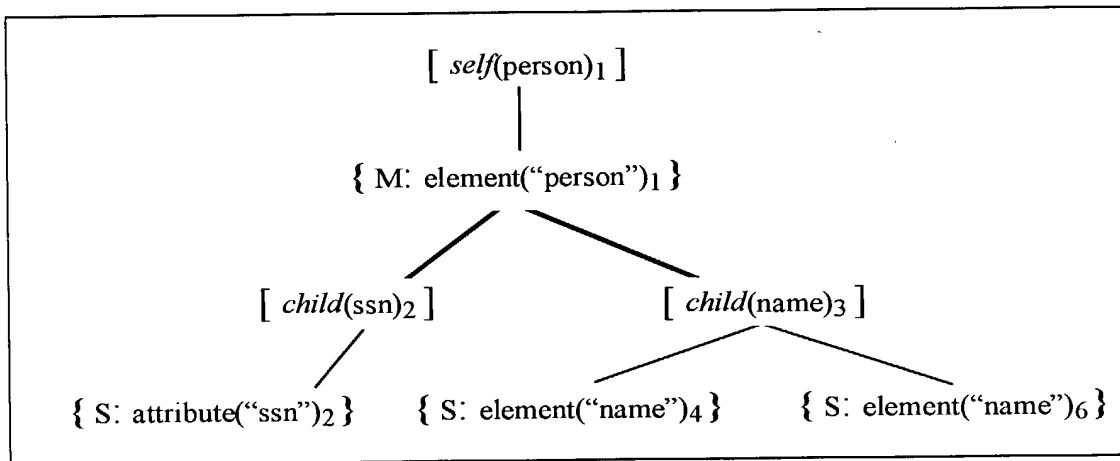


Fig. 19



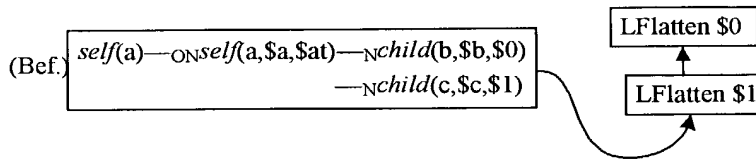


Fig. 23

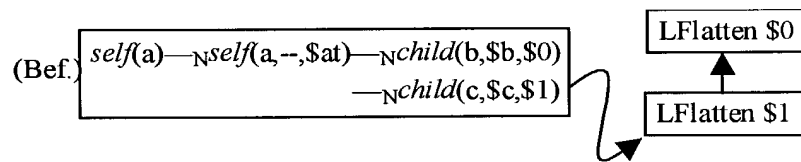
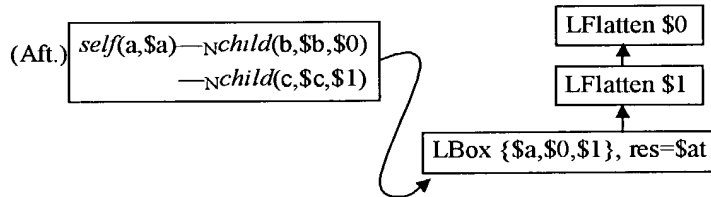


Fig. 24

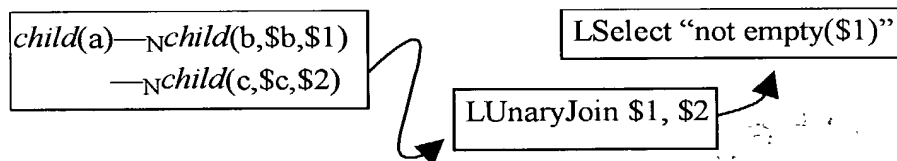
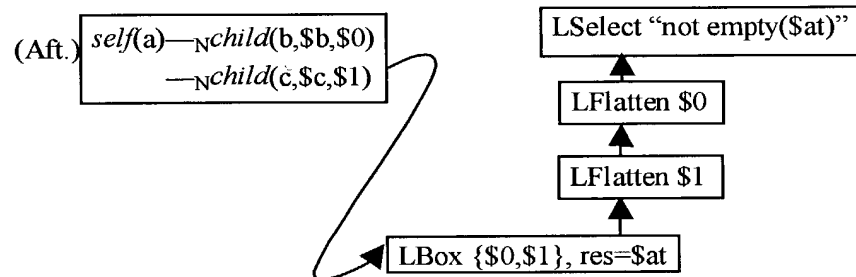


Fig. 25